ARCHAEOLOGICAL EVALUATION OF PREHISTORIC SITE CA-SDI-16,651 WITHIN THE ROBNETT TENTATIVE PARCEL MAP PROJECT, SAN DIEGO COUNTY, CALIFORNIA

(TPM 20726)

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National Archaeological Data Base Information
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Sites: CA-SDI-16,651 (Robnett-1)
USGS Quadrangles: Barrett Lake and Dulzura 7.5'
Area: Less than 1-Acre.
Key Words: County of San Diego, Bratton Valley, Robnett Property, Testing and Evaluation Program, Bedrock Milling, Santiago Peak Volcanics, Obsidian, Utilized Flakes, Stone Bead, CA-SDI-16,651 (Robnett-1).

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ABSTRACT

Laguna Mountain Environmental, Inc. (Laguna Mountain) conducted an archaeological testing and evaluation program at prehistoric site CA-SDI-16,651 for the proposed Robnett Tentative Parcel Map (TPM) Project. Archaeological testing included mapping, surface collection, recordation of bedrock milling, and shovel test pit (STP) and test unit excavation.

Cultural resource work was conducted in accordance with the California Environmental Quality Act (CEQA) and the County of San Diego implementing regulations and guidelines including the County of San Diego Resource Protection Ordinance (RPO). The County of San Diego will serve as lead agency for the project and CEQA compliance.

A survey of the Robnett TPM Project identified three archaeological sites within the project area (Wade 2003). All three sites were bedrock milling stations with associated artifacts. Incorporation of these sites into open space easements, if possible, was recommended. Avoidance of site CA-SDI-16,651 (Robnett-1) was not feasible within the goals of the proposed project. This site was previously identified as a bedrock milling site with seven milling features with associated groundstone and lithic debitage fragments. No evidence of midden soils was observed (Wade 2003).

A testing and evaluation program was conducted at site CA-SDI-16,651 to evaluate this site's eligibility for the California Register of Historical Resources (California Register) and it's significance under the County RPO. Testing and site documentation included mapping and surface collection, recordation of additional bedrock milling, and the excavation of 23 STPs and two 1x1 meter test units. The testing program was conducted between August 20, and 27, 2003 by Mr. Andrew R. Pigniolo, RPA. Although brush was dense in portions of the site, the cultural resources testing program adequately served to evaluate the site without significant constraints.

Testing and evaluation studies identified three loci (A-C) at site CA-SDI-16,651. Sparse subsurface deposits were identified at Loci A and B. Locus C contained greater depth and artifact diversity but integrity was low throughout the site resulting from intense bioturbation. CA-SDI-16,651 appears to represent both Late Prehistoric and Archaic occupations. An absence of stratigraphic integrity does not allow these components to be distinguished at the site. Due to low integrity, lack of datable material, and low amounts of cultural material other than debitage, questions established in the research design could not be addressed with site data. Photographs, artifacts, and project records from this testing program will be temporarily curated at Laguna Mountain until final curation arrangements can be made at the San Diego Archaeological Center or another appropriate regional repository.

Testing has evaluated CA-SDI-16,651 for the California Register of Historical Resources (California Register) eligibility and significance under the County RPO. The site lacks the integrity and content needed to qualify as important and significant under these criteria. No further work is necessary to address this resource.

I. INTRODUCTION

A. Project Description

The proposed project is a minor subdivision and residential development of four parcels plus a remainder parcel. The proposed project is for residential land use. As part of the project, residential development including building pads, road, and utilities would be graded and excavated.

The project area is located in southern portion San Diego County within the Community of Deerhorn Valley in the County of San Diego (Figure 1). It is located in an area called Bratton Valley west of Barrett Lake and south west of Deerhorn Valley itself. The proposed subdivision is located at 2275 Honey Springs Road. The project is located in portions of Sections 22 and 23 in Township 17 South, Range 2 East. The project is limited to the proposed project area and does not include off-site improvements. The project area is shown on the Barrett Lake and Dulzura USGS 7.5' Quadrangles (Figure 2).

The testing and evaluation program was conducted pursuant to the California Environmental Quality Act (CEQA) as revised in 1998, and respective County of San Diego implementing regulations and guidelines including the County Resource Protection Ordinance (RPO). The County of San Diego will serve as lead agency for CEQA compliance. The testing and evaluation program was conducted to determine if site CA-SDI-16,651 is eligible for inclusion in the California Register of Historic Resources (California Register) or significant under the County RPO.

B. Project Personnel

The cultural resource testing and evaluation program has been conducted by Laguna Mountain Environmental, Inc. (Laguna Mountain), whose cultural resources staff meet state and local requirements. Mr. Andrew R. Pigniolo served as Principal Investigator for the project. Mr. Pigniolo is a member of the Register of Professional Archaeologists (RPA; previously called SOPA) and meets the Secretary of the Interior's standards for qualified archaeologists. He is also on the County of San Diego's list of qualified archaeologists. Mr. Pigniolo has an MA in Anthropology from San Diego State University and has extensive experience in the San Diego region. The resume of the Principal Investigator is included in Appendix A.

C. Structure of the Report

This report follows the State Historic Preservation Office's guidelines for Archaeological Resource Management Reports (ARMR). The report introduction provides a description of the project and associated personnel. Section II provides background on the project area and previous research. Section III describes the research design, and testing methods while Section IV describes the results including artifact analysis. Section V provides evaluation criteria and recommendations and Section VI includes the references cited.

Figure 1

Regional Location

Figure 2

Project Location

II. NATURAL AND CULTURAL SETTING

The following environmental and cultural background provides a context for the cultural resource inventory.

A. Natural Setting

The project area is located in the southern portion of San Diego County within the foothills and interior valleys of the region. Two steep mountains, located northwest and south of the property, create a narrow gorge through which Pringle Creek exists Bratton Valley to the southwest. The project area straddles this narrow gorge and includes an elevated bench southeast of Pringle Creek. Elevations range from 1820 to 2360 feet above mean sea level (MSL). The property is largely undeveloped but includes one residence in the north central portion of the property and several graded roads.

The geomorphology of the project area is largely a product of the region's geologic history. During the Jurassic and late Cretaceous (>100 million years ago) a series of volcanic islands paralleled the current coastline in the San Diego region. The remnants of these islands stand as Mount Helix, Black Mountain, and the Jamul Mountains among others. This island arc of volcanos spewed out vast layers of tuff (volcanic ash) and breccia that have since been metamorphosed into hard rock of the Santiago Peak Volcanic formation. These fine-grained rocks provided a regionally important resource for Native American flaked stone tools.

At about the same time, a granitic and gabbroic batholith was being formed under and east of these volcanoes. This batholith was uplifted and forms the granitic rocks and outcrops of the Peninsular Range and the foothills to the west. The project area is part of this batholith and is underlain by these granitic rocks (Rogers 1992). Outcrops of granodiorite were present throughout the project area. In San Diego County the large and varied crystals of these granitic rocks provided particularly good abrasive surfaces for Native American seed processing. These outcrops were frequently used for bedrock milling of seeds. The batholith contains numerous pegmatite dikes. This was a good source of quartz, a material used by Native Americans for flaked stone tools and ceremonial purposes.

As the Peninsular Batholith rose, it warped and metamorphosed the overlying sediments, forming the Julian Schist (Remeika and Lindsay 1992). This formation contains quartzite, a material also used for Native American flaked stone tools. Its relatively poor flaking qualities made this quartzite less popular for tool making than the quartz and Santiago Peak materials.

The soils on the property include Cieneba series and acid ignious rocks (USDA 1973). The Cieneba series consists of excessively drained , very shallow to shallow coarse sandy loams that formed in material weathered in place from granitic rock. These soils are on rolling to mountainous uplands

and have slopes ranging from 5 to 75 percent. The slopes on the northern side of the project area are Cieneba very rocky coarse sandy loam with 30 to 75 percent slopes. This soil is steep to very steep. It has rock outcrops on about 20 percent of the surface and very large granodioritic boulders on about 30 percent. The soil is only 5 to 15 inches deep over hard granodiorite.

The higher parts of the southern portion of the project area including is mapped as acid ignious rock land (USDA 1973). This is rough steeply sloping broken terrain. Large boulders and granitic rock outcrops cover 50 to 90 percent of the total area. Soil material between these rocks is loam to loamy course sand in texture and is very shallow over decomposed granite.

Pringle Creek is the major seasonal drainage in the region that could have provided a seasonal water source for Native Americans using the area.

The climate of the region can generally be described as Mediterranean, with cool wet winters and hot dry summers. Rainfall limits vegetation growth. Three vegetation communities adapted to the dry conditions of the area occur in the project area. These include mixed chaparral, southern coast live oak riparian woodland, and coastal sage scrub. Components of these communities provided important resources to Native Americans in the region. Sage seed, yucca, buckwheat, acorns, and native grasses formed important food resources to Late Prehistoric Native Americans.

Animal resources in the region include deer, fox, raccoon, skunk, bobcats, coyotes, rabbits, and various rodent, reptile, and bird species. Small game, dominated by rabbits, is relatively abundant.

B. Cultural Setting

Paleoindian Period

The earliest well documented prehistoric sites in southern California are identified as belonging to the Paleoindian period, which has locally been termed the San Dieguito complex/tradition. The Paleoindian period is thought to have occurred between 9,000 years ago, or earlier, and 8,000 years ago in this region. Although varying from the well-defined fluted point complexes such as clovis, the San Dieguito complex is still seen as a hunting focused economy with limited use of seed grinding technology. The economy is generally seen to focus on highly ranked resources such as large mammals and relatively high mobility which may be related to following large game. Archaeological evidence associated with this period has been found around inland dry lakes, on old terrace deposits of the California desert, and also near the coast where it was first documented at the Harris Site.

Early Archaic Period

Native Americans during the Archaic period had a generalized economy that focused on hunting and gathering. In many parts of North America, Native Americans chose to replace this economy with types based on horticulture and agriculture. Coastal southern California economies remained largely based on wild resource use until European contact (Willey and Phillips 1958). Changes in hunting

technology and other important elements of material culture have created two distinct subdivisions within the Archaic period in southern California.

The Early Archaic period is differentiated from the earlier Paleoindian period by a shift to a more generalized economy and an increased focus on the use of grinding and seed processing technology. At sites dated between approximately 8,000 and 1,500 years before present, the increased use of groundstone artifacts and atlatl dart points, along with a mixed core-based tool assemblage, identify a range of adaptations to a more diversified set of plant and animal resources. Variations of the Pinto and Elko series projectile points, large bifaces, manos and portable metates, core tools, and heavy use of marine invertebrates in coastal areas are characteristic of this period, but many coastal sites show limited use of diagnostic atlatl points. Major changes in technology within this relatively long chronological unit appear limited. Several scientists have considered changes in projectile point styles and artifact frequencies within the Early Archaic period to be indicative of population movements or units of cultural change (Moratto 1984), but these units are poorly defined locally due to poor site preservation.

Late Archaic or Late Prehistoric Period

Around 2,000 B.P., Yuman-speaking people from the eastern Colorado River region began migrating into southern California, representing what is called the Late Prehistoric Period. The Late Prehistoric Period in San Diego County is recognized archaeologically by smaller projectile points, the replacement of flexed inhumations with cremation, the introduction of ceramics, and an emphasis on inland plant food collection and processing, especially acorns (True 1966). Inland semi-sedentary villages were established along major water courses, and montane areas were seasonally occupied to exploit acorns and piñon nuts, resulting in permanent milling features on bedrock outcrops. Mortars for acorn processing increased in frequency relative to seed grinding basins. This period is known archaeologically in southern San Diego County as the Yuman (Rogers 1945) or the Cuyamaca Complex (True 1970).

The Kumeyaay (formerly referred to as Diegueño) who inhabited the southern region of San Diego County, western and central Imperial County, and northern Baja California (Almstedt 1982; Gifford 1931; Hedges 1975; Luomala 1976; Shipek 1982; Spier 1923) are the direct descendants of the early Yuman hunter-gatherers. Kumeyaay territory encompassed a large and diverse environment which included marine, foothill, mountain, and desert resource zones. Their language is a dialect of the Yuman language which is related to the large Hokan super family.

There seems to have been considerable variability in the level of social organization and settlement variance. The Kumeyaay were organized by patrilineal, patrilocal lineages that claimed prescribed territories, but did not own the resources except for some minor plants and eagle aeries (Luomala 1976; Spier 1923). Some lineages occupied procurement ranges that required considerable residential mobility, such as those in the deserts (Hicks 1963). In the mountains, some of the larger groups occupied a few large residential bases that would be occupied biannually, such as those occupied in Cuyamaca in the summer and fall, and in Guatay or Descanso during the rest of the year (Almstedt 1982; Rensch 1975). According to Spier (1923), many Eastern Kumeyaay spent the

period of time from spring through autumn in larger residential bases in the upland procurement ranges, and wintered in mixed groups in residential bases along the eastern foothills on the edge of the desert (i.e., Jacumba and Mountain Springs). This variability in settlement mobility and organization reflects the great range of environments in the territory.

Acorns were the single most important food source used by the Kumeyaay. Their villages were usually located near water, which was necessary for leaching acorn meal. Other storable resources such as mesquite or agave were equally valuable to groups inhabiting desert areas, at least during certain seasons (Hicks 1963; Shackley 1984). Seeds from grasses, manzanita, sage, sunflowers, lemonadeberry, chia and other plants were also used along with various wild greens and fruits. Deer, small game and birds were hunted and fish and marine foods were eaten. Houses were arranged in the village without apparent pattern. The houses in primary villages were conical structures covered with tule bundles, having excavated floors and central hearths. Houses constructed at the mountain camps generally lacked any excavation, probably due to the summer occupation. Other structures included sweathouses, ceremonial enclosures, ramadas and acorn granaries. The material culture included ceramic cooking and storage vessels, baskets, flaked lithic and ground stone tools, arrow shaft straighteners, stone, bone, and shell ornaments.

Hunting implements included the bow and arrow, curved throwing sticks, nets and snares. Shell and bone fishhooks, as well as nets, were used for fishing. Lithic materials including quartz and metavolcanics were commonly available throughout much of the Kumeyaay territory. Other lithic resources, such as obsidian, chert, chalcedony and steatite, occur in more localized areas and were acquired through direct procurement or exchange. Projectile points including the Cottonwood Series points and Desert Side-notched points were commonly produced.

Kumeyaay culture and society remained stable until the advent of missionization and displacement by Hispanic populations during the eighteenth century. The effects of missionization, along with the introduction of European diseases, greatly reduced the native population of southern California. By the early 1820s, California was under Mexico's rule. The establishment of ranchos under the Mexican land grant program further disrupted the way of life of the native inhabitants.

Ethnohistoric Period

The Ethnohistoric period refers to a brief period when Native American culture was initially being affected by Euroamerican culture and historical records on Native American activities were limited. When the Spanish colonists began to settle California, the project area was within the territory of a loosely integrated cultural group historically known as the Kumeyaay or Northern and Southern Diegueño because of their association with the San Diego Mission. The Kumeyaay as a whole speak a Yuman language which differentiates them from the Luiseño, who speak a Takic language to the north (Kroeber 1925). Both of these groups were hunter-gatherers with highly developed social systems. European contact introduced diseases that dramatically reduced the Native American population and helped to break down cultural institutions. The transition to a largely Euroamerican lifestyle occurred relatively rapidly in the nineteenth century.

Historic Period

Cultural activities within San Diego County between the late 1700s and the present provide a record of Native American, Spanish, Mexican, and American control, occupation, and land use. An abbreviated history of San Diego County is presented for the purpose of providing a background on the presence, chronological significance, and historical relationship of cultural resources within the county.

Native American control of the southern California region ended in the political views of western nations with Spanish colonization of the area beginning in 1769. De facto Native American control of the majority of the population of California did not end until several decades later. In southern California, Euroamerican control was firmly established by the end of the Garra uprising in the early 1850s (Phillips 1975).

The Spanish Period (1769-1821) represents a period of Euroamerican exploration and settlement. Dual military and religious contingents established the San Diego Presidio and the San Diego and San Luis Rey Missions. The Mission system used Native Americans to build a footing for greater European settlement. The Mission system also introduced horses, cattle, other agricultural goods and implements; and provided construction methods and new architectural styles. The cultural and institutional systems established by the Spanish continued beyond the year 1821, when California came under Mexican rule.

The Mexican Period (1821-1848) includes the retention of many Spanish institutions and laws. The mission system was secularized in 1834, which dispossessed many Native Americans and increased Mexican settlement. After secularization, large tracts of land were granted to individuals and families and the rancho system was established. Cattle ranching dominated other agricultural activities and the development of the hide and tallow trade with the United States increased during the early part of this period. The Pueblo of San Diego was established during this period and Native American influence and control greatly declined. The Mexican Period ended when Mexico ceded California to the United States after the Mexican-American War of 1846-48.

Soon after American control was established (1848-present), gold was discovered in California. The tremendous influx of American and Europeans that resulted quickly drowned out much of the Spanish and Mexican cultural influences and eliminated the last vestiges of de facto Native American control. Few Mexican ranchos remained intact because of land claim disputes and the homestead system increased American settlement beyond the coastal plain.

C. Prior Research

The archaeological inventory of the project area was conducted by Wade (2003). The survey included archival and other background studies in addition to a field survey of the project area. The archival research consisted of literature and record searches at local archaeological repositories, in

addition to an examination of historic maps, and historic site inventories. This information was used to identify previously recorded resources and determine the types of resources that might occur in the survey area.

During the survey by Wade (2003) adverse survey conditions were encountered that included extremely steep slopes and dense chaparral vegetation. Because impacts were not proposed for these area is was not considered a significant detriment to the evaluation effort.

The field survey identified three bedrock milling sites on the level benches above the drainage. Two of these sites also included light lithic scatters (Wade 2003). These sites were recommended for avoidance with 15 m buffers. Site CA-SDI-16,651 was one of the three sites identified within the project area during the survey. To meet project goals, this site could not be avoided while the other two sites will be placed in open space easements.

III. RESEARCH DESIGN AND METHODS

A. Research Design

The goal of the testing and evaluation program was to determine if CA-SDI-16,651 qualifies as eligible for nomination to the California Register and is important under CEQA and County guidelines. To accomplish this goal of evaluating the site, background information was examined and assessed, and a testing program was conducted to determine if subsurface cultural remains are present at the site and if they meet criteria for importance. The ability of cultural resources to address important research questions is used as a measure of site significance under Criterion D of the California Register. General research topics of chronology, subsistence, and exchange and mobility were established for this project.

The purpose of the research design is to provide criteria for evaluating the significance of the archaeological resources in the project area. This research design identified three elements of significance (integrity, Native American heritage concerns, and research potential) important for the evaluation of the prehistoric resources within the project. Each element is examined below and specific research questions and data needs are established to evaluate research potential. The information derived from archaeological testing was compared with the data needs of the research questions and, taken together with the integrity and Native American heritage concerns, was used to evaluate significance.

Integrity

Resource integrity is a critical part of evaluation. For archaeological purposes, integrity usually refers to the preservation of artifact associations and stratigraphy. Bioturbation and other natural factors affecting artifact associations are common in the San Diego region, and much of the region area has also been affected by agriculture and urban development.

Native American Heritage Concerns

Native American heritage concerns need to be included in significance evaluations as part of State policy. Native American concerns particularly focus on religious sites, sites that contain human remains, and sites with items used for religious purposes.

Research Potential

Research potential is the most applicable of the California Register criteria for archaeological resources. To establish a framework to evaluate if a site may be likely to yield information important in prehistory or history, important research questions are established along with data needs. These research criteria are established below.

Theoretical Orientation

As a social science, archaeology seeks to understand human behavior. Because of the nature of the archaeological record, archaeologists look at behavior in terms of cultural patterns, and environmentally oriented archaeologists attempt to explain these patterns in the context of various and changing natural and social environments. While much of the past archaeological research in San Diego County has focused on reconstructing culture change over time or "culture history," new theoretical ideas in the 1960s and 1970s highlighted the importance of the environment and shifted the emphasis of archaeology from reconstructing history to understanding culture (Binford 1989).

The fundamental theoretical orientation that underlies this study, and much of the work that has been conducted in San Diego County to date, is cultural materialism. "Cultural materialism" as used here essentially holds that practical, survival, and economic aspects of culture ultimately determine the success or the spread of specific behavior patterns (Hayden 1993). Cultural ecology and environmental archaeology are forms of cultural materialism, emphasizing the role of the environment as a practical controlling factor on culture and human behavior. The perspectives of cultural materialism and cultural ecology are appropriate for the study area because of the direct relationship between hunter-gatherer economy and the environment and because these concepts represent a continuation of recent thinking in the region. Cultural materialism is also appropriate for study of the historical archaeological resources because it focuses on relationships within systems.

Research Topics, Implications, and Data Requirements

Prehistoric Subsistence

Reconstructing the subsistence economy of prehistoric hunter-gatherers is a key question for cultural ecology. Historic period hunter-gatherers typically occupied extreme environments and/or had been heavily impacted by European colonial expansion. As a consequence, understanding the cultural adaptations of hunter-gatherers in more productive environments is heavily reliant on archaeological data.

For the most part, subsistence during the Late Prehistoric in San Diego County is fairly well understood through the ethnographic record. Ethnographic information has provided a level of detail beyond the archaeological record, but certain aspects are poorly known.

Based on the abundance of bedrock milling, and the lack of marine shell on the surface of CA-SDI-16,651, it is likely subsistence will be focused on inland terrestrial resources. This site is located well beyond the ten kilometer coastal foraging radius suggested by Jones (1992).

- How does site subsistence pattern relate to resource availability and were there two divergent subsistence patterns in the Late Prehistoric?

Hypothesis: The general pattern is one of using available resources: Acorn processing subsistence technologies and small mammal procurement should dominate the assemblage. Marine resources will represent a minimal component of the assemblage.

Data Needs:

- Stratigraphic contexts that indicate the site contains interpretable cultural strata that can be taken to represent the results of relatively short-term occupations or a single occupation that can be compared to other single occupation sites.
- Material suitable for establishing chronology from these contexts.
- Vertebrate and invertebrate faunal material, along with tools that reflect subsistence focus and activities such as projectile points, bifaces, and milling tools.
- Sufficient quantities of ecofactual material to allow patterns to be defined. To obtain a statistically valid sample, quantities of 50 items per m^3 are probably required.

Chronology

Chronology and aspects of culture history have long been the subjects of archaeological research in the San Diego region. The debate over the advent of Tizon Brown Ware in western San Diego County is ongoing, although the appearance of this plain brownware ceramic is the most generally recognized chronological marker in the area (Laylander 1992). This debate continues to be evidenced in conflicts over the dividing line date between the pre-ceramic and early ceramic Late Prehistoric Period (Meighan 1954; Moriarty, III 1966; Warren 1964; May 1976, 1978), and over the geographical advent of Tizon Brown Ware within San Diego County (True et al. 1974; May 1976, 1978; Berryman 1981). For example, many investigators argue that the introduction of ceramics in western San Diego County occurred some time within the past 1,500 years (Rogers 1945; Meighan 1954; True 1986; Moriarty, III 1966), although within this group there is considerable variability. James R. Moriarty, III (1966) suggested that the earliest occurrence of pottery in western San Diego County was encountered at the Spindrift Site (CA-SDI-39), specifically in 1,270 ± 250 B.P. (A.D. 680). This proposed date, however, has been challenged due to the possibility of sample contamination and deposit mixing (Warren 1964). Ronald V. May (1976, 1978), on the other hand, provided a radiocarbon date from the Cottonwood Creek site, located in the Laguna Mountains, suggesting that the appearance of ceramics occurred in 960 ± 80 years B.P. and 950 ± 80 years B.P. (A.D. 990-1000).

Another relationship between chronology and the introduction of ceramics in western San Diego County is the geographical dissemination of pottery. D.L. True et al. (1974), for example, argued that the advent of pottery in northern San Diego County (Luiseño territory) could be shifted back to as early as A.D. 1200-1300, with its first introduction from the souther Kumeyaay-Diegueño territory. An east-to-west gradient for the introduction of ceramics has been suggested by May

(1976, 1978), who argued that ceramics were lacking in sites located west of Cottonwood Creek and dated to A.D. 1300. Judy Berryman (1981), on the other hand, argues the opposite geographical trend with a radiocarbon date of A.D. 730 ± 110 from a site to the west of the mountains, suggesting that pottery actually advanced from the west to the east.

The advent of pottery and the presence of a preceramic Late Prehistoric period in western San Diego County, in terms of its timing and geographical establishment, still remains an important matter for chronologically sensitive archaeological research.

- Does CA-SDI-16,651 represent a site that was occupied during the Late Prehistoric preceramic phase and/or the Archaic Period?

Hypothesis: No ceramics were observed during the survey of CA-SDI-16,651, it is presumed that this temporary campsite was occupied prior to the advent of pottery in San Diego County. Furthermore, the site was most likely occupied during at least a portion of the Late Prehistoric Period, as indicated by the presence of several bedrock milling features.

Data Needs:

- Stratigraphic contexts that indicate the site contains interpretable cultural strata that can be taken to represent the results of relatively short-term occupations or a single occupation that can be compared to other single occupation sites.

- Material suitable for radiocarbon dating from these contexts.

- Artifacts representative of activities carried out at the site. To obtain a statistically valid sample, quantities of 50 items per m^3 are probably required.

Prehistoric Mobility and Exchange

Settlement Patterns have been the subject of considerable research in San Diego County. This topic contributes to the definition of settlement systems and the study of their change through time, both elements important to local prehistoric studies. The interaction of cultural groups and the natural landscape is an important aspect of human behavior. Just as cultural geographers study current land use patterns to aid in urban planning, the study of prehistoric settlement patterns can provide insight into past strategies of interaction with the environment.

Most settlement pattern studies focus on the relationship between natural resources and areas of human occupation. A general assumption is that important resources for subsistence create a draw for settlement, and that people will tend to locate near important water and food resources. Other types of sites may also be located near resources, but may not be related to habitation. These special task sites, such as isolated bedrock milling stations and lithic procurement/reduction areas, also provide important evidence on how people used the natural landscape.

Within the project vicinity, Pringle Creek, represents an important resource that might have created a permanent settlement draw. Based on the survey data, however, the site appears to be only a temporary campsite, and not a permanent village as would be expected based on the presence of a perennial water resource. This could, however, be explained in one of two ways: site CA-SDI-16,651 is a dispersed village site with multiple other loci in the area, or there could be a better location for a village site with other important natural resources situated nearby.

An examination of resources used at a site and their source provenience is a means of examining mobility. Direct procurement, or travel over relatively large distances to procure resources is one aspect of mobility. Another aspect relates to territoriality. A seasonal round type of mobility strategy with bipolar village locations is often the model for Late Prehistoric mobility.

- How does this site fit into the regional settlement system through time?

Hypothesis: Site patterning in relation to water, landform, and lithic resources is expected. Exchange played a very minor role in resource procurement and, although mobility provided a range of available resources at different time intervals, the site reflects foraging and processing behavior and the local resources of the area. Roughly 90% of the assemblage will represent local materials within a 10-km foraging radius.

Data Needs:

- Stratigraphic contexts that indicate the site contains interpretable cultural strata that can be taken to represent the results of relatively short-term occupations or a single occupation that can be compared to other single occupation sites.

- Material suitable for chronological control from these contexts.

- Artifacts representative of activities carried out at the site. To obtain a statistically valid sample, quantities of 50 items per m^3 are probably required.

- Sufficient quantities of ecofactual material to allow patterns to be defined. To obtain a statistically valid sample, quantities of 50 items per m^3 are probably required.

B. Testing Methods

The goal of the testing and evaluation program was to evaluate the eligibility for the California Register of site CA-SDI-16,651. Testing included recordation of the bedrock milling at the site, mapping and surface collection of artifacts, and subsurface excavation to determine if a subsurface component is present.

Mr. Andrew Pigniolo conducted field testing between August 20 and 27, 2003. The previously recorded site area was initially intensively surveyed using 3 m parallel north/south transects over the site area. Any surface artifacts identified during the survey were marked with pin flags for later collection.

The site was mapped using tape and compass and each surface artifact was mapped and collected. Previously unrecorded features were drawn and measured. Milling elements were photographed in addition to being drawn and measured.

A series of 23 shovel test pits (STPs) were excavated within the site to determine if subsurface deposits were present and to establish the boundaries of the site. Because subsurface deposits were present, further testing with 2, 1x1 m test units were necessary to evaluate content and integrity. STPs were set out in cardinal directions across the site area and adjacent to the bedrock milling features.

STPs were manually excavated circular test pits measuring 30 cm in diameter. STPs were excavated in 10 cm arbitrary, contour levels. These tests were used to determine if a subsurface deposit existed and to define site boundaries and integrity. The goal of STP placement was to test the areas within the site most likely to contain subsurface artifacts.

The STP data indicated the presence of high density and low density subsurface deposits at the site. Test units were used to better assess the integrity and content. Care was taken to avoid areas that were previously disturbed. A total of two one meter square excavation units were placed in the high density areas of the site to assess the greatest range of site content. The units were excavated in 10 cm arbitrary contour levels, and provenience within each level was maintained. The unit datum was established in the high corner of each unit, and the levels were measured in contour levels using a line-level and tape measure from the datum. Units were excavated until decomposed granite subsoil was exposed in the entire unit floor.

All excavated soil was passed through 1/8-inch mesh hardware cloth and dry-screened in the field. Artifacts were removed from the screens and bagged by level. Unit level sheets summarizing results and observations were completed following the excavation of each 10 cm level. This information included the type of cultural material recovered, soil conditions, and any noted disturbance. Cultural material was separated into historic and prehistoric artifact and ecofact categories, bagged and labeled by 10 cm level, and taken to the laboratory for cleaning, analysis, and temporary curation.

A photographic record was kept to document the progress of the testing program. This included general overviews, unit profiles, and views of site excavation, and milling features. Color print photographs were taken during the entire testing program. A photographic log was kept to document orientation and subject matter.

Laboratory work for all cultural material was conducted by the Principal Investigator. A standard system of cataloging cultural material was used to document the cultural material recovered. All items were washed with a brush and water, except for groundstone items, which were cleaned with a dry brush. The material was then separated by material class within each level prior to cataloging.

Each artifact or group of artifacts was counted, weighed and/or measured and given consecutive catalog numbers, which were either marked directly on the artifact or on the container or bag. Each item was analyzed for specific attributes particular to that material class. The catalogue for the cultural material recovered is included in Appendices B.

IV. RESULTS

A. Surface Collection, Site Structure, and Soils

CA-SDI-16,651 was initially recorded as Robnett-1 by Wade (2003). A total of seven bedrock milling features with 15 slicks and 9 basins were located along with two groundstone fragments and several fragments of volcanic and quartz debitage. Some of the artifacts were discovered in the dirt road that runs through the site. These artifacts were at a distance from the milling features and their original location was unclear. No evidence of midden soil was noted in the dirt road or in the vicinity of the features (Wade 2003).

CA-SDI-16,651 is located on an irregular bench away from and on the south side of Pringle Creek. It is in generally very dense chaparral with some overgrown openings containing coastal sage scrub species. The site includes both bedrock milling and associated artifacts. Surface collection resulted in the collection of 38 artifacts from 35 different locations within the site (Figure 3 and Table 1). An additional bedrock milling feature (Feature H) was also identified in heavy brush during the surface survey. Based on features and surface collection data, the site includes three major loci of activity (See Figure 3).

Locus 1

This locus is located at the eastern end of the site around a bedrock outcrop with two milling features (A & B) (See Figure 3). The locus is just west of a small saddle and southwest of a knoll with a large boulder outcrop. The dirt road in the area passes through the locus. Grading and brushing associated with road construction and a trench for soil studies have severely impacted the integrity of the portions of this locus away from the milling features. It appears that most of this locus was covered by dense chaparral before road clearance. Artifacts associated with this locus appear to be primarily north and west of the milling features. Milling Feature A which contains 7 slicks and 5 basins and milling Feature B with 3 slicks are included in the locus. Surface indications in the road cut and an open soils trench, suggested that soils were less than 50 cm deep over DG in this area of the site. Surface artifacts included two fragments of groundstone and lithic debitage (See Talbe 1).

Locus B

Locus B is an artifact scatter that has also been exposed by road grading and brushing. It is located at the southern edge of the site and is much smaller than Locus A (See Figure 3). It is not directly associated with bedrock milling features. Locus B is separated from Locus A by a minor topographic ridge. It is limited to a small artifact scatter exposed in the brushed area. Surface artifacts included a mano fragment, utilized flakes, a hammerstone fragment, the single piece of pottery from the site, and lithic debitage (See Table 1).

Figure 3

CA-SDI-16,651 Site Map

(Confidential figure - NOT INCLUDED)

Table 1.
Surface Collection Results

Cat#	Location	Type
CA-SDI-16651-1	#1	Debitage
CA-SDI-16651-2	#2	Debitage
CA-SDI-16651-3	#3	Debitage
CA-SDI-16651-4	#4	Debitage
CA-SDI-16651-5	#5	Debitage
CA-SDI-16651-6	#6	Debitage
CA-SDI-16651-7	#7	Debitage
CA-SDI-16651-8	#8	Debitage
CA-SDI-16651-9	#9	Tizon Brown Ware
CA-SDI-16651-10	#10	Debitage
CA-SDI-16651-11	#10	Flake Tool
CA-SDI-16651-12	#10	Flake Tool
CA-SDI-16651-13	#11	Debitage
CA-SDI-16651-14	#12	Debitage
CA-SDI-16651-15	#13	Mano
CA-SDI-16651-16	#14	Debitage
CA-SDI-16651-17	#15	Flake Tool
CA-SDI-16651-18	#16	Debitage
CA-SDI-16651-19	#17	Debitage
CA-SDI-16651-20	#17	Debitage
CA-SDI-16651-21	#18	Debitage
CA-SDI-16651-22	#19	Mano
CA-SDI-16651-23	#20	Debitage
CA-SDI-16651-24	#21	Debitage
CA-SDI-16651-26	#22	Mano
CA-SDI-16651-25	#23	Debitage
CA-SDI-16651-27	#24	Debitage
CA-SDI-16651-28	#25	Debitage
CA-SDI-16651-29	#26	Debitage
CA-SDI-16651-30	#27	Debitage
CA-SDI-16651-31	#28	Flake Tool
CA-SDI-16651-32	#29	Debitage
CA-SDI-16651-33	#30	Debitage
CA-SDI-16651-34	#31	Debitage
CA-SDI-16651-35	#32	Debitage
CA-SDI-16651-36	#33	Hammerstone
CA-SDI-16651-37	#34	Debitage
CA-SDI-16651-38	#35	Debitage

Locus C

Locus C is the main portion of the site. It includes a partial opening with coastal sage scrub species within the dense surrounding chaparral. Although much of this area is overgrown, it suggests at one time that the site may have been more open and covered by coastal sage scrub species. Locus C is located along and on the south side of a small east/west trending ridge. It includes a series of low granitic bedrock outcrops that are scattered along the southeastern side of the locus. Surface artifacts were present but sparse and focused around the bedrock milling and an opening in the brush. Surface artifacts were limited to eight fragments of lithic debitage (See Table 1).

This locus contains most of the bedrock milling at the site. Feature C is located at the southern edge of the locus and contains a single slick. Features D, E, and F are located in an opening with low rock outcrops. Feature D contains one slick and 1 basin, while Features E and F each contain one slick. Feature G is located to the south of this opening in heavy brush. It contains three basins and one slick. Several of these basins show extensive use.

During the current study an additional bedrock milling feature (Feature H) was identified in heavy brush, south of Feature G. This feature contains a single slick.

Soils and Integrity

STPs

Because of the isolated rural nature of the area, there was almost no recent intrusive material on the site surface and no intrusive material was collected during testing. Testing included the excavation of 23 STPs throughout the site area. They identified subsurface cultural material within all three of the site loci. In Locus A most STPs ranged from 20 to 50 cm in depth. They contained medium brown sandy loam over reddish brown DG subsoil. STP 0N/10W was excavated in the bank adjacent to the road cut. The area appeared largely intact. Dark brown sandy loam with higher amounts of organic material were identified to a depth of 60 cm. These may be in part related to adjacent shrubs and leaf mold but this STP was the only one within the locus where cultural material was recovered. STPs excavated west between Locus A and Locus C were generally shallow (30 cm) and contained lighter soil under a cover of leaf litter.

Within Locus C soils were very shallow over bedrock at the eastern end of the locus. Along the western part of the ridgeline within this locus, soils were also shallow, ranging from 15 to 30 cm in depth. They contained medium brown sandy loam with cultural material. Soils ended abruptly at DG. An area north of Feature C with more extensive bioturbation was noted during the furface walkover and STP 10S/90W was excavated in this area. This STP identified an area of deeper deposits soil reaching 60 cm.

STPs within Locus B were generally shallow (30 cm) and showed evidence of disturbance. The only STP in this area from which subsurface material was recovered (STP 30A/70W), showed evidence of soil redeposition.

Unit 4S/11W

Unit 4S/11W was excavated in Locus A of the site. It was placed as near as possible to STP 0S/10W where subsurface deposits had been initially identified. Figure 4 shows the east and south profiles of the unit. Unit 4S/11W reached a depth of 40 cm before reaching DG. The surface of the unit appears to have been lightly disturbed by brushing activity associated with the nearby road and soils trench. A slight grove that was probably associated with this activity was present along the western surface of the unit. As indicated in Figure 4, most of the surface of the unit still retained a leaf and organic layer associated with the chaparral understory in the area indicating that surface disturbance was limited. Below this initial organic layer was a dark brown sandy loam soil. This soil contained fragments of exfoliated granite from the adjacent boulders.

Heavy rodent activity was noted throughout this soil layer. Roots from adjacent shrubs were also present within the unit. Although largely composed of dark brown sandy loam occasional patches of DG sand indicated rodent movement of soil from the lower levels of the unit. Small amounts of fire-affected rock were recovered during excavation but additional granitic rocks were also present in the unit and profiles.

The lowest strata within Unit 4S/11W initially appeared at 30 cm and is made up of sandy DG. By 40 cm below surface DG was present across the floor of the unit. Soils within Unit 4S/11W indicate the presence of a shallow soil horizon with heavy rodent activity. Numerous rodent tunnels in the DG subsoil suggest that the soil layer above it has been thoroughly mixed by bioturbation.

Unit 8S/94W

Unit 8S/94W was excavated near STP 10S/90W in Locus C in an area where surface rodent backdirt suggested the presence of deeper soils. Unit 8S/94W was excavated to a depth of 70 cm before completely encountering DG (See Figure 4). While organic material and grasses were present on the surface, a layer of leaf duff similar to that encountered in Unit 4S/11W was not present due to the open nature of the area and absence of nearby shrubs. Below the surface a relatively homogenous soil layer was encountered throughout most of the unit. This soil layer consisted of medium brown sandy loam with granitic sand from the underlying DG. No additional strata could be identified within this soil layer.

Evidence of rodent activity within the unit was abundant. As indicated in Figure 4 both filled and active rodent burrows were present. Two rodent nests were encountered during excavation of the unit. Fresh organic material (grass) was encountered to a depth of 60 cm. The contact between the sandy loam layer and the underlying DG was irregular and included rodent tunnels. The contact was otherwise sharp, suggesting material had not weathered in place. Based on the amount of bioturbation, presence of recent grass, artifact distribution, and contact with the DG, it appears that the soils within this unit represent a homogenous mix resulting from intensive bioturbation over a long period of time. This is consistent with the sharp contacts between soil and subsoil seen in nearby STPs.

Figure 4

Unit Profiles

B. Testing Results

Testing included mapping, surface collection, excavation of 23STPs and two test units. Table 2 provides a summary of the results of testing. As indicated in the table, the majority of artifacts recovered during testing (69%) came from Unit 8S/94W. Surface artifacts were generally sparse with the majority being recovered from Locus A. Recovery from STPs was similar to the surface recovery indicating a sparse subsurface deposit in each locus. Unit 4S/11W indicated a very sparse subsurface deposit was present in Locus A. Unit 8S/94W within Locus C stands out as the major source of cultural material within the site.

Table 2.
Cultural Material by Provenience

Material	Surface	STPs	Unit 4S/11W	Unit 8S/94W	Total	Percent
Flake Tool	4	1	0	1	6	2.3
Hammerstone	1	0	1	0	2	0.8
Debitage	31	31	3	173	238	93.0
Mano	3	1	1	1	6	2.3
Shell Bead	0	0	0	1	1	0.4
Bone Tool	0	2	0	0	2	0.8
Pottery	1	0	0	0	1	0.4
Total Count	40	35	5	176	256	100
Percent	15.6	13.7	2.0	68.8	100	
Bone	0	0.2	0	0.7	0.9	0.0
Charcoal	0	0.8	0	4.1	4.9	0.1
Fire-Affected Rock	0	964.5	1624.2	5378.3	7967	99.9
Total Weight (g)	0	965.5	1624.2	5383.1	7972.8	100
Percent	0.0	12.1	20.4	67.5	100	

STPs indicated a very sparse deposit was present in each locus of the site (Table 3). STP 0N/10W was the only positive STP in Locus A. It contained only 2 artifacts but the presence of a mano fragment suggested tools were present in the subsurface component. The mano fragment was recovered from the 30-40 cm level of the STP suggesting some depth to the deposit (Table 4).

A single STP was also positive in Locus B. STP 30S/70W contained a single fragment of debitage. This area was highly disturbed by road clearing and brushing and it was felt that both the minor amount of subsurface material and the disturbance did not warrant the presence of a unit in this locus.

Table 3.
STP Results by Provenience

Material	STP 0N/10W	STP 0N/70W	STP 0N/90W	STP 0N/100W	STP 0N/110W	STP 0N/120W	STP 10N/70W	STP 10S/90W	STP 30S/70W	Total	Percent
Flake Tool	0	0	0	0	0	1	0	0	0	1	2.9
Debitage	1	1	6	4	1	7	1	9	1	31	88.6
Mano	1	0	0	0	0	0	0	0	0	1	2.9
Bone Tool	0	0	0	2	0	0	0	0	0	2	5.7
Total Count	2	1	6	6	1	8	1	9	1	35	100
Percent	5.7	2.9	17.1	17.1	2.9	22.9	2.9	25.7	2.9	100	
Bone	0	0	0	0.1	0	0.1	0	0	0	0.2	0.0
Charcoal	0	0	0	0.8	0	0	0	0	0	0.8	0.1
Fire-Affected Rock	0	12.4	254.2	0	0	0	0	697.9	0	964.5	99.9
Total Weight (g)	0	12.4	254.2	0.9	0	0.1	0	697.9	0	965.5	100
Percent	0.0	1.3	26.3	0.1	0.0	0.0	0.0	72.3	0.0	100	

Table 4.
STP Results by Depth

Material	Surface	0-10 cm	10-20 cm	20-30 cm	30-40 cm	40-50 cm	50-60 cm	Total	Percent
Flake Tool	0	0	1	0	0	0	0	1	2.9
Debitage	1	8	13	5	1	2	1	31	88.6
Mano	0	0	0	0	1	0	0	1	2.9
Bone Tool	0	2	0	0	0	0	0	2	5.7
Total Count	1	10	14	5	2	2	1	35	100
Percent	2.9	28.6	40.0	14.3	5.7	5.7	2.9	100	
Bone	0	0.1	0.1	0	0	0	0	0.2	0.0
Charcoal	0	0.8	0	0	0	0	0	0.8	0.1
Fire-Affected Rock	0	0	12.4	764.5	0	0	187.6	964.5	99.9
Total Weight (g)	0	0.9	12.5	764.5	0	0	187.6	965.5	100
Percent	0.0	0.1	1.3	79.2	0.0	0.0	19.4	100	

The majority of positive STPs (7) were present in Locus C. STPs 0N/70W and 10N/70W indicated a shallow and sparse deposit was associated with surface artifacts in the eastern portion of the locus. STPs 0N/90W to 0N/120W show the presence of a consistent but generally shallow deposit of cultural material along the top of the ridgeline in the eastern portion of the locus. The presence of 7 debitage fragments and a flake tool in STPs 0N/120W indicates that this deposit is present along the entire ridge until the slope at the end of the ridge is reached.

STP 10S/90W was excavated in an area of surface artifacts and apparently deeper soils. This was the most productive STP at the site recovering a total of 9 debitage fragments. This was also the deepest STP at the site reaching a depth of 60 cm.

Table 4 indicates that most of the cultural material recovered from the STPs was obtained from relatively shallow depths. The 10-20 cm level was the source of 40% of the artifacts recovered. This suggests that throughout the site area, soils and subsurface deposits are relatively shallow. Nearly 85.8% of the artifacts recovered from the STPs were from the upper 30 cm of the site. The STPs indicated that depth of any significance was present only in the area of STP 10S/90W.

Unit 4S/11W was excavated in Locus A to assess the cultural deposit in that area. The results of recovery from this unit are summarized in Table 5. Only 5 artifacts were recovered from the 40 cm excavation. This is an extremely low recovery suggesting a very minimal subsurface deposit in this area. Soils and artifact distribution suggest that cultural material is present throughout the depth of the deposit.

Table 5.
Unit 4S/11W Summary by Depth

Material	0-10 cm	10-20 cm	20-30 cm	Total	Percent
Hammerstone	1	0	0	1	20.0
Debitage	1	0	2	3	60.0
Mano	0	0	1	1	20.0
Total Count	2	0	3	5	100
Percent	40.0	0.0	60.0	100	
Fire-Affected Rock	0	594.8	1029.4	1624.2	100.0
Total Weight (g)	0	594.8	1029.4	1624.2	100
Percent	0.0	36.6	63.4	100	

Unit 8S/94W represents the major subsurface deposit and concentration of artifacts within the site. This unit provided the majority of cultural material recovered during testing. As indicated in Table 6, the vast majority of cultural material recovered (98.3%) was debitage. Only three other artifacts were recovered from the entire unit. These included a utilized flake, a mano fragment, and a shell bead.

Subsurface artifact distribution was relatively homogenous. Debitage counts ranged from 24 to 38 in the complete levels of the unit. The sharp drop off in debitage counts from 50 to 70 cm correspond with a reduction in soil volume as DG within the unit increased with depth. The artifact distribution supported the observations of the homogeneity of the soils.

The increase in fire-affected rock between 20 and 50 cm may also reflect movement due to bioturbation within the soil column. Bone, which is very sparse, does appear to be limited to the upper 30 cm of the unit, while charcoal is distributed evenly throughout the soil column.

Table 6.
Unit 8S/94W Summary by Depth

Material	Sur-face	0-10 cm	10-20 cm	20-30 cm	30-40 cm	40-50 cm	50-60 cm	60-70 cm	Total	Percent
Flake Tool	0	0	0	0	0	0	1	0	1	0.6
Debitage	1	24	38	25	38	26	17	4	173	98.3
Mano	0	0	0	0	1	0	0	0	1	0.6
Shell Bead	0	0	0	1	0	0	0	0	1	0.6
Total Count	1	24	38	26	39	26	18	4	176	100
Percent	0.6	13.6	21.6	14.8	22.2	14.8	10.2	2.3	100	
Bone	0	0.2	0.4	0.1	0	0	0	0	0.7	0.0
Charcoal	0	0	1.1	0.2	0.1	2.6	0.1	0	4.1	0.1
Fire-Affected Rock	0	41.5	95	3141.8	764.9	1173.7	161.4	0	5378	99.9
Total Weight (g)	0	41.7	96.5	3142.1	765	1176.3	162	0	5383	100
Percent	0.0	0.8	1.8	58.4	14.21	21.852	3	0	100	

C. Artifact Analysis

Flake Tools

A total of six utilized flakes were recovered during testing. These were the only flaked lithic tools recovered from the site, although the debitage assemblage suggests the manufacture of other tools. Most of the utilized flakes were recovered from the surface in Locus B, while a single utilized flake was recovered from STP 0N/120W and Unit 8S/94W, both within Locus C. No utilized flakes were recovered from Locus A.

The utilized flakes were relatively consistent. They all represent large and relatively thin interior flakes made from fine-grained aphanitic Santiago Peak Volcanic material. They all show heavy rounding from use on at least one narrow edge. These artifacts appear to have been used in cutting very resistant material that would result in heavy wear before discard. Based on the lack of bone and other material that may have been worked, it seems likely that these tools may have been used for cutting and shaping wood.

Hammerstones

Two hammerstones were recovered during testing. Both were recovered from Locus A of the site and both are made of milky quartz. CA-SDI-16651-36 was recovered from the surface of the site and reflects a fragment of a larger piece of quartz with battering at one end. CA-SDI-16651-70 was recovered from the 0-10 cm level of Unit 4S/11W. It represents a larger fragment of milky quartz that has been battered along one acute edge. Both artifacts are similar in that they are based on irregular quartz fragments.

Debitage

By far the majority of artifacts recovered during testing were debitage. Debitage represented 93% of the artifacts recovered indicating that one of the major activities at this site was tool production and/or finishing.

Table 7 indicates that by far the majority of the debitage was Santiago Peak Volcanic material. This material would have been available in the Otay Mountain area to the east and is the nearest lithic material available. Santiago Peak Volcanic material made up 97.1 percent of the debitage with only 7 other flakes recovered.

Table 7.
Debitage Materials and Condition

Condition/Style	Chert	Milky Quartz	Obsidian	SPV	Total	Percent
Interior	1	2	4	223	230	96.6
Primary	0	0	0	1	1	0.4
Secondary	0	0	0	7	7	2.9
Total	1	2	4	231	238	100
Percent	0.4	0.8	1.7	97.1	100	

Of the other lithic materials recovered, the majority were obsidian (N=4). All of these obsidian fragments were too small for chemical sourcing. One fragment of obsidian was recovered from Unit 4S/11W. This fragment was opaque and porphyritic suggesting it is from the Obsidian Butte source near the southern end of the Salton Sea. The other three fragments of obsidian were from Unit 8S/94W. In contrast to the sample from Unit 4S/11W, all three were translucent and not porphyritic. This suggests they are not from the Obsidian Butte source and may be from the Coso source.

The use of obsidian from different sources has been closely linked to changes in source preference through time. Obsidian Butte material is often associated with Late Prehistoric activity, while other sources, including Coso are associated with Archaic activity. This is one suggestion that the site may be multicomponent in composition.

As indicated on Table 7 only two quartz debitage fragments were recovered during testing. Both were from Locus A and Locus A also contained the only quartz tools from the site. Quartz use has often been associated with the Late Prehistoric period which corresponds with suggestion from the obsidian at Locus A.

A single fragment of chert was recovered from Unit 8S/94W in Locus C. This chert was fire-affected. It could fall into the range of variation within the Proctor Valley chert source or be from desert sources to the east.

As indicated in Table 7, the vast majority of the debitage (96.6%) lacked cortex. This probably reflects both extraction from quarries as opposed to secondary sources, and primary reduction and shaping off-site. Debitage reflected largely core reduction technology. Several flakes, however, reflected bifacial thinning and production of large bifaces. Many of the utilized flakes tools were made with this kind of reduction. Platform preparation for thinning was evident on several specimens. This type of reduction would be typical of Archaic or Paleoindian technology. At least two pressure flakes were also identified within the collection reflecting the final stages of biface or arrow production. Overall the debitage assemblage reflects a mixture of chronological and technological indicators suggesting that the site contains both a Late Prehistoric and Archaic assemblage.

Groundstone

A total of six mano fragments were recovered during testing. Three of these were recovered during surface collection of Locus A and Locus B. Two additional fragments were recovered during subsurface testing at Locus A while the final mano fragment was recovered from Unit 8S/94W in Locus C. This indicates that seed processing was a component of all three loci. No metate fragments were recovered suggesting that the manos were used on the nearby bedrock milling features.

Artifact CA-SDI-16651-22 is an irregular subrounded fragment of granite that has a ground surface on one site. It was recovered from the surface near Feature A and probably represents use of local material as a mano. The remaining mano fragments reflect use of well-rounded cobbles of both gabbro and Eocene cobbles that were probably imported to the site from other areas. These more formalized manos include bifacial use and shouldering and pecking associated with extended use and rejuvination. The manos, in combination with the bedrock milling at the site indicates that seed processing was an important component of activity at CA-SDI-16,651. Bedrock milling is most often associated with Late Prehistoric activity. The presence of bedrock milling in both Loci A and C and the presence of groundstone in Locus B, suggests that each of the three site loci contain a Late Prehistoric component.

Pottery

A single fragment of Tizon Brown Ware pottery was recovered from the surface of Locus B. This artifact is a body sherd and shows use of residual clays with granitic inclusions typical of the Native American pottery produced in western San Diego County. Pottery is directly associated with the Late Prehistoric period and shows the use of storage and or cooking containers at the site.

Stone Bead

A single bead was recovered from the 20-30 cm level of Unit 8S/94W. The artifact is a disk bead, which is relatively uncommon in the region. It is biconically drilled slightly off center. The artifact appears to be made of a fine chlorite schist or steatite. It does not match local sources in physical appearance. Beads of this type are often associated with Archaic period occupation.

Bone Tools

Two fragments of what is likely the same bone tool were recovered from the 0-10 cm level of STP 0N/100W. This tool appears to have been manufactured from a fire-hardened large or medium mammal long bone. It is roughly triangular in cross section and has been flattened by grinding and polishing along the length of the tool. Bone awls are often more rounded, but this appears to be the most likely use of the tool. It appears to have narrowed to a point at one end. Bone awls are often associated with basketry production.

Bone

A total of 0.9 grams of bone was recovered during testing. All of this material was recovered from Locus C. The majority of bone was recovered from Unit 8S/94W. All the recovered bone was burned and appears to be culturally associated animal bone and not representative of natural animal death.

Most of the bones were calcined and have been exposed to a direct flame at extremely high temperatures (greater than 800º Celsius). It is likely that the calcined specimens were discarded in a fire hearth. Calcined animal categories included medium mammal. One fragment may represent a rabbit femur while three others may represent fragments of a medium-sized mammal cranium and may also be rabbit. No human remains were recovered during testing.

Charcoal

Charcoal was relatively abundant throughout the testing program. It was present in all negative STPs as well as the test units and probably reflects natural brush fires for the most part. There was little evidence to suggest that the majority of charcoal was cultural in nature. In Unit 4S/11W charcoal was particularly abundant from the surface down and its abundance in association iwth partially burned wood fragments suggested it was largely natural in origin. A total of 4.9 grams of charcoal

were collected during testing. These represent larger fragments largely from Unit 8S/94W. The presence of recent grass throughout many levels of the unit and partially burned wood suggests that the charcoal may largely be of natural origin in this unit as well. The presence of fire-affected rock at the site does indicate that fire was a part of cultural activity at the site but is was impossible to distinguish natural from cultural charcoal.

Fire-Affected Rock

Fire-affected rock was an important component of the cultural material from the site. It indicates that cooking and heating was a part of the activities at CA-SDI-16,651. The majority of fire-affected rock was recovered from Unit 8S/94W, but the material was scattered and did not represent a feature. Most of the fire-affected rock was made up of locally available subrounded granitic and gabroic rock fragments that could have been present on site or collected from nearby Pringle Creek.

D. Discussion

Testing at CA-SDI-16,651 indicated the presence of three somewhat descrete loci of activity within the site area. Bedrock milling features were associated with Loci A and B and subsurface deposits were present at all three loci. Artifacts were dominated by lithic debitage with very few tools and other artifacts in the assemblage. The site occupants appear to have focused on seed processing and lithic tool production activities. Other activities, such as possible wood working, cooking, minimal hunting, basket making, and food storage are also suggested by artifacts in the assemblage from the site.

Soils throughout the site area indicated the site has been heavily impacted by bioturbation and deposits appear to lack stratigraphic integrity and be thoroughly mixed by bioturbation. Charcoal was present at the site but appears indistinguishable from natural charcoal in the area. In combination with the bioturbation evidence, charcoal does not appear to be a reliable material to date the site. The presence of bone in the deposit was very minimal and it is unlikely the small fragments recovered during testing would provide enough carbon for standard radiocarbon dating.

Bedrock milling, apparent Obsidian Butte Obsidian, pottery, and use of quartz all provide indications of a Late Prehistoric component at the site. Although the focus of Obsidian Butte Obsidian and quartz within Locus A suggests that Late Prehistoric may be better represented at this locus, all three loci contained indications of Late Prehistoric activity. Archaic period use of the site is suggested by the presence of what appears to be Coso obsidian, large bifacial reduction flakes, and the stone disk bead. Indicators of this period of use is also present in all three site loci. The artifact assemblage therefore, suggests that all three loci are multicomponent in age. This combined with the lack of stratigraphic integrity and datable material, suggests that site components cannot be clearly separated.

While the site lacks chronological integrity, it does contain a somewhat interesting artifact assemblage. The presence of two kinds of obsidian and chert are indicators of exchange in the

region. The stone bead also indicates exchange in addition to the use of ornamentation. It is a relatively unusual artifact in San Diego County sites.

The utilized flakes showing heavy use-wear are also an interesting component of the site. They also show a pattern of tool use at the site and perhaps indicate a focus on wood shaping and finishing.

The amount of debitage and the depth of the soils in Locus C suggest a moderate deposit in this area of the site while the remainder of the site is limited in depth and artifact quantity. Overall, CA-SDI-16,651 shows seasonal occupation and use along Pringle Creek over a period of time that includes both the Archaic and Late Prehistoric.

V. EVALUATION CRITERIA, SIGNIFICANCE, AND RECOMMENDATIONS

A. Evaluation Criteria

The evaluation criteria used to determine site significance are provided below.

Cultural resource investigations must comply with a variety of laws, regulations, and ordinances. Many of these laws are complementary and provide similar protection for cultural resources at various jurisdictional levels.

The importance of cultural resources under State law as defined in CEQA has been refined to coincide with those of the California Register. Section 15064.5 of the CEQA guidelines provides for closer consistency with the National Register criteria. "Historical resources" as defined by Section 15064.5 of CEQA include:

(1) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Pub. Res. Code SS5024.1, Title 14 CCR, Section 4850 et seq.).

(2) A resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

(3) Any object, building, structure, site, area, place, record or manuscript which a lead agency determines to be historically significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically" significant" if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code SS5024.1, Title 14 CCR, Section 4852) including the following:

(A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

(B) Is associated with the lives of persons important in our past;

(C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

(D) Has yielded, or may be likely to yield, information important in prehistory or history.

(4) The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to section 5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in section 5024.1(g) of the Public Resource Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resource Code sections 5020.1(j) or 5024.1.

California Register Criteria (a), (b), and (c) are unlikely to be met by prehistoric sites within the Robnett project because they most often apply to standing structures or resources with good historical documentation. Criterion (d) is the most applicable to prehistoric archaeological resources and historical resources with no architectural integrity and limited historical association.

The problem of establishing the research value of archaeological data at the State, and local level has been addressed by numerous archaeologists and cultural resource managers. A consensus had developed that emphasizes the development of a problem-oriented research design that ties explicit research questions to larger order research issues in anthropology, history, and other social sciences. The research design provided in Section III establishes specific criteria for evaluating the importance of site information. These research criteria can provide information that will provide public benefit by expanding our understanding of history and prehistory.

In addition to the significance criteria defined above, the County of San Diego Resource Protection Ordinance defines significant prehistoric or historic sites as a:

> Location of past intense human occupation where buried deposits can provide information regarding important scientific research questions about prehistoric or historic activities that have scientific, religious, or other ethnic value of local, regional, state, or federal importance. Such locations shall include, but not be limited to: any prehistoric or historic district, site, interrelated collection of features or artifacts, building, structure, or object included in or eligible for inclusion in the National Register of Historic Places or the State Landmark Register; or included or eligible for inclusion, but not previously rejected for the San Diego County Historic Site Board List; any are of past human occupation located on public or private land where important prehistoric or historic activities and/or events occurred; and any location of past or current sacred religious or ceremonial observances protected under Public Law 95-341, the American Indian Religious Freedom Act or Public Resources Code Section 5097.9, such as burial(s), pictographs, petroglyph, solstice observatory sites, sacred shrines, religious ground figures, and natural rocks or places which are of ritual, ceremonial, or sacred value to any prehistoric or historic ethnic group.

The relationship between RPO and CEQA significance is not clearly defined, but RPO significant cultural resources are described as “unique” in RPO and are generally considered to be at a higher level of significance than the thresholds set by CEQA. RPO significant resources are most often

considered to be resources of both scientific and religious or ethnic significance, such as archaeological resources with human remains or rock art.

B. Significance

The goal of the project was to test and evaluate site CA-SDI-16,651 for the California Register of Historical Resources (California Register) eligibility and significance under the County RPO. Testing included mapping, surface collection, recordation of additional bedrock milling, and the excavation of 23 STPs and two test units. Surface conditions and subsurface testing indicated that bioturbation has severely effected the subsurface deposits at the site and that stratigraphic integrity is not present. Artifacts also suggest that all three loci of the site contain multiple components. The lack of stratigraphic integrity does not allow for these components to be distinguished.

In addition to limited integrity, CA-SDI-16,651 also does not contain datable material, or the quantities of tools, and faunal material necessary to address the questions identified in the research design. Although, CA-SDI-16,651 does contain some interesting artifacts and a subsurface deposit, it lacks the integrity and data necessary to qualify as eligible for nomination to the California Register under Criterion D. CA-SDI-16,651 also lacks qualities that would make it eligible for significance under the County RPO.

C. Management Recommendations

Testing has evaluated CA-SDI-16,651 for the California Register of Historical Resources (California Register) eligibility and significance under the County RPO. The site lacks the integrity and data needed to qualify as important and significant under these criteria. Because CA-SDI-16,651 does not qualify as significant or important, no further work is necessary to address this resource.

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